

# NEW HAMPSHIRE WATER SUPPLY AND POLLUTION CONTROL COMMISSION

## LAKE TROPHIC DATA

### MORPHOMETRIC:

|                                   |  |
|-----------------------------------|--|
| LAKE <u>Millsfield Pond</u>       | LAKE AREA (HA) <u>65.07</u>                  |
| TOWN <u>Millsfield</u>            | MAXIMUM DEPTH (M) <u>4.3</u>                 |
| COUNTY <u>Coos</u>                | MEAN DEPTH (M) <u>3.0</u>                    |
| RIVER BASIN <u>Androscoggin</u>   | VOLUME (M <sup>3</sup> ) <u>1,921,500</u>    |
| LATITUDE <u>44° 46' N</u>         | MUD SURFACE AREA (HA) <u>94.32</u>           |
| LONGITUDE <u>71° 16'</u>          | RELATIVE DEPTH <u>0.5</u>                    |
| ELEVATION (FT) <u>1721</u>        | SHORE CONFIGURATION <u>1.19</u>              |
| SHORE LENGTH (M) <u>3400</u>      | AREAL WATER LOAD (M/YR) <u>26.86</u>         |
| WATERSHED AREA (HA) <u>2641.8</u> | FLUSHING RATE (YR <sup>-1</sup> ) <u>9.1</u> |
| % WATERSHED PONDED <u>0</u>       | PHOSPHORUS RETENTION COEFF. <u>0.45</u>      |

### BIOLOGICAL:

| DATE                                      | 13 MAR 1985       | 15 AUG 1984            |
|---|-------------------|------------------------|
| DOM. PHYTOPLANKTON (% total) <sup>1</sup> | Dinobryon (75%)   | Tabellaria (45%)       |
| <sup>2</sup>                              | Melosira (15%)    | Chrysosphaerella (40%) |
| NUMBER OF ALGAL GENERA                    | 5                 | 15                     |
| SPECIES DIVERSITY                         | 1.21              | 1.83                   |
| CHLOROPHYLL <u>a</u> (µg/L)               |                   | 7.56                   |
| DOM. ZOOPLANKTON (% total) <sup>1</sup>   | Kellicottia (50%) | Keratella (30%)        |
| <sup>2</sup>                              | Synchaeta (35%)   | Nauplius larva (30%)   |
| ROTIFERS/LITER                            | 191               | 268                    |
| MICROCRUSTACEA/LITER                      | 0                 | 132                    |
| TOTAL ZOOPLANK. CNTS (cells/L)            | 196               | 400                    |
| VASCULAR PLANT ABUNDANCE                  |                   | Sparse                 |
| DOMINANT VASCULAR PLANTS <sup>1</sup>     |                   | Sparganium             |
| <sup>2</sup>                              |                   |                        |
| <sup>3</sup>                              |                   |                        |
| SECCHI DISK TRANSPARENCY (M)              |                   | 3.2                    |
| BOTTOM DISS. OXYGEN (mg/L)                | 3.9               | 5.3                    |
| SEDIMENT: % ORGANIC MATTER                |                   |                        |

LAKE TYPE: A natural pond.

SUMMER THERMAL STRATIFICATION: YES ☐ NO ☒ WEAK ☐

IF YES, VOLUME OF HYPOLIMNION  (m<sup>3</sup>) THERMOCLINE DEPTH  (m)

CHEMICAL: (mg/L unless indicated otherwise) LAKE: Millsfield Pond

|                                 | WINTER      |       | SUMMER      |      |  |
|---------------------------------|-------------|-------|-------------|------|--|
| DATE                            | 13 MAR 1985 |       | 15 AUG 1984 |      |  |
| DEPTH (M)                       | 1.0         | 3.0   | 1.2         | 2.5  |  |
| pH (UNITS)                      | 6.5         | 6.4   | 6.9         | 6.3  |  |
| ALKALINITY (I. P.)              | 6.9         | 9.1   | 5.4         | 5.2  |  |
| ALKALINITY (F.E.P.)             | 8.3         | 10.4  | 7.4         | 7.0  |  |
| NITRITE+NITRATE NITROGEN        |             |       |             |      |  |
| TOTAL KJELDAHL NITROGEN         |             |       |             |      |  |
| TOTAL PHOSPHORUS                | 0.002       | 0.004 | .006        | .001 |  |
| SPEC. CONDUCT. ( $\mu$ Mhos/cm) | 34.8        | 36.6  | 21.7        | 26.6 |  |
| APPARENT COLOR (UNITS)          | 20          | 25    | 25          | 30   |  |
| TRUE COLOR (440 nm)(UNITS)      | 23          | 22    | 28          | 27   |  |
| MAGNESIUM                       |             |       | .52         |      |  |
| CALCIUM                         |             |       | 2.4         |      |  |
| SODIUM                          |             |       | <1          |      |  |
| POTASSIUM                       |             |       | .20         |      |  |
| CHLORIDE                        |             |       |             | <2   |  |
| TN : TP                         |             |       |             |      |  |
| INORG-N : INORG-P               |             |       |             |      |  |
| [Mg+Ca] : [Na+K]                |             |       |             |      |  |
| CALCITE SATURATION INDEX        |             |       | 3.3         |      |  |

\* = NOT DEFENSIBLE

NR = NO RESULT

TROPHIC CLASSIFICATION: 1984

D.O. S.D. PLANT ABUND. CHL a TOTAL PTS. TROPHIC CLASS.

CLASSIFICATION POINTS:

|   |   |   |   |   |        |
|---|---|---|---|---|--------|
| 0 | 2 | 0 | 1 | 3 | OLIGO. |
|---|---|---|---|---|--------|

COMMENTS:

1. Road to pond was rough, but launch site was good and parking for 2-3 vehicles was available.
2. About 26 cabins were on the shoreline (20% developed).
3. Most of the surrounding land was owned by Boise Paper Co.
4. At least 11 inflowing streams were observed.
5. Steep sided shoreline but the bottom was relatively flat and shallow.

# MILLSFIELD POND

MILLSFIELD

ROUGH BATHYMETRIC CHART

WSPCC -- 1984

SOUNDED BY FATHOMETER

5 FT. ISOBATHS

14 FT. maximum depth



0 .3 Km.

access point

## FIELD DATA SHEET

WATER BODY Millsfield Pond (Big)TOWN MillsfieldBY WSPCCDATE COLLECTED 15 August 1984WEATHER Overcast, rainy

| STATION   | DEPTH<br>(M) | TEMP.<br>(°C) | *DISSOLVED<br>OXYGEN | OXYGEN: %<br>SATURATION |  |  |  |
|-----------|--------------|---------------|----------------------|-------------------------|--|--|--|
| Deep Spot | 0.0          | 24.0          | 9.2                  | 108%                    |  |  |  |
|           | 1.0          | 23.8          | 9.2                  |                         |  |  |  |
|           | 2.0          | 23.5          | 9.1                  |                         |  |  |  |
|           | 3.0          | 22.5          | 7.5                  |                         |  |  |  |
|           | 3.5          | 21.0          | 5.3                  | 59%                     |  |  |  |
|           |              |               |                      |                         |  |  |  |
|           |              |               |                      |                         |  |  |  |
|           |              |               |                      |                         |  |  |  |
|           |              |               |                      |                         |  |  |  |
|           |              |               |                      |                         |  |  |  |
|           |              |               |                      |                         |  |  |  |
|           |              |               |                      |                         |  |  |  |

SECCHI DISK (M) 3.2

COMMENTS:

BOTTOM DEPTH (M) 3.6TIME 1030

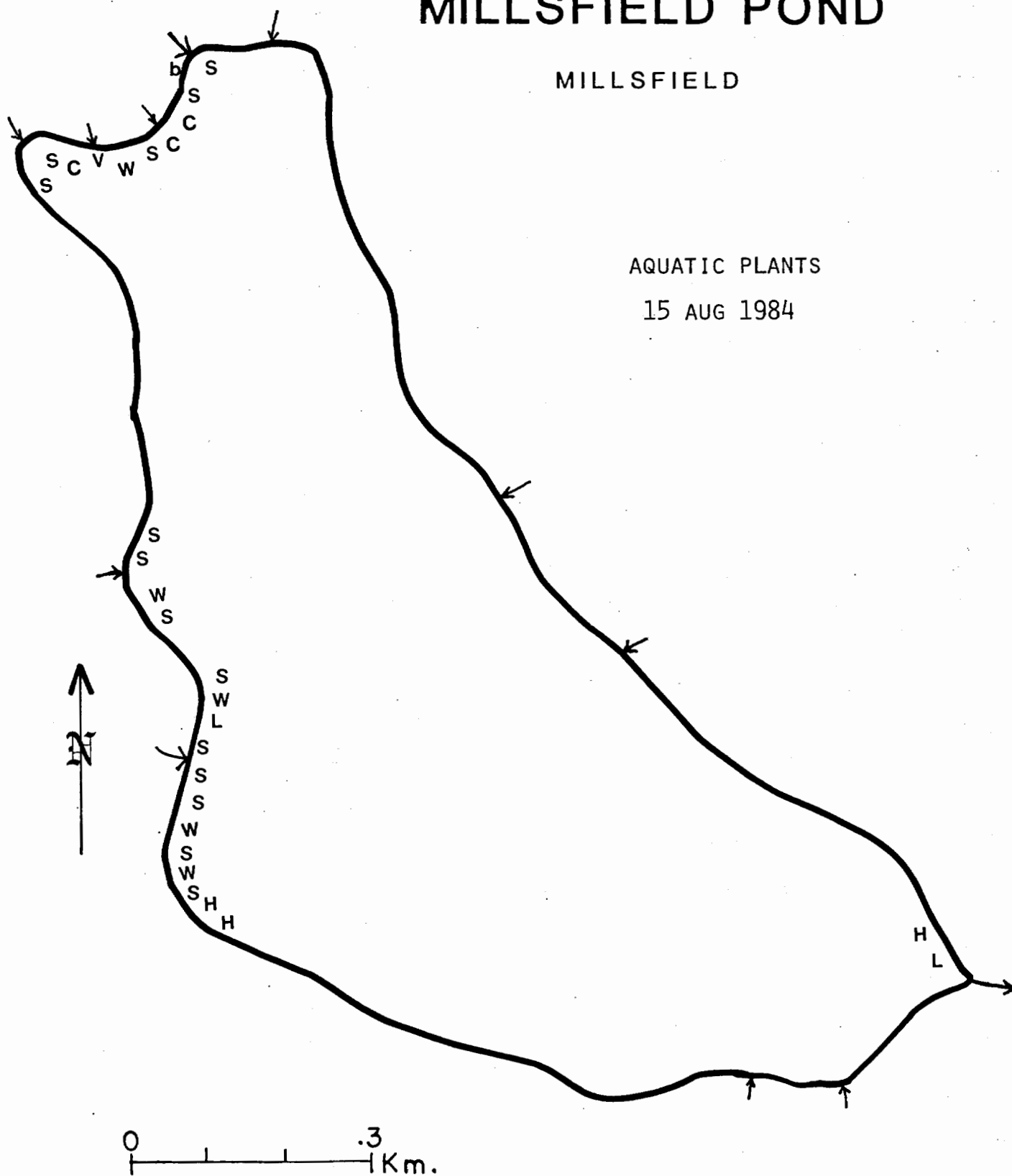
\* Dissolved oxygen values in mg/L

# MILLSFIELD POND

MILLSFIELD

AQUATIC PLANTS

15 AUG 1984



## AQUATIC PLANT SURVEY

LAKE Millsfield Pond TOWN Millsfield DATE 8/15/84 BY WSPCC

[illegible]

OVERALL ABUNDANCE Sparse

GENERAL OBSERVATIONS:

1. Three loons were observed; freshwater mussels were numerous.